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Gutnyk Maryna
(Kharkiv)
ORCID 0000-0002-2723-2755

Chrzan Krystian Leonard
(Wroclaw)
ORCID 0000-0002-1316-6806

# BECKMANN'S FAMILY CONTRIBUTION TO THE DEVELOPMENT OF EUROPEAN MOTOR TRANSPORT-AT THE BEGINNING OF XX CENTURY

*ABSTRACT. The formation of the automotive industry in Europe in the early twentieth century was considered. The data about car development in Great Britain, France and Germany is given. It was shown how the automobile racing influenced on the development of cars, in particular the transition from cars creation with a steam engine to cars creation with an internal combustion engine.*

*More and more people became interested in this type of transportation. It was shown that at that time in Europe there were many workshops where cars were developed by scientists-innovators. Among such pioneers of the car industry is to Beckman's family. The activity of this family starting from Paul Beckman to his son Otto Jr. and even his daughter Ilse is presented.*

*To date, it is extremely limited information about Beckmann's family contribution to the automotive industry in Europe. It was Paul Beckmann who started constructing cars in Wroclaw. At the factory which was founded by his father the production of both as small cars and as trucks and even sports was organized. It is noted that before the beginning of the World War I the most efficient cars developed a speed of up to 95 km/h. Beckmann's family cars became prize-winners of the international competitions of that time. It is stated that Paul Beckman can be considered the initiator of a safety belt. His cars were equipped with special leather straps.*

*It should be noted that the company successfully developed and had a dealer network in Germany, Poland and Russia.*

*During the interwar period, the company collapsed and was bought by a larger brand. However, Otto Jr., son of Paul Beckman, continued to take care of a family business. Today there is only one car with the mark of the Wroclaw car factory.*

***Keywords:*** *automotive industry, Beckmann's family, Wroclaw, auto racing, Red Flag Act, K. Benz, G. Daimler, L. Serpollet*

Modern life cannot be imagined without a car. According to the latest estimates, every sixth inhabitant of the planet has one car [1]. This technical device was developed from the self-propelled toy for the Chinese emperor, created by scientist F. Ferbist circa 1672 [2, p. 25], the steam engine car – the invention by the Frenchman N. Cugnot in 1769, Daimler-Benz internal combustion engine from 1880s

[3] Despite the rapid development of this type of transportation, in some countries absurd laws were adopted. In the middle of the XIX century Britain was the leader in the development of emerging road transportation. However, owners of railways and equestrian crews thought that the car is a threat to their existence. They united in the fight against a potential competitor. In 1861, they were allowed to pass a law restricting the speed of «highway locomotives» up to 10 miles/h (out of the city and up to 5 miles/h in the city. Also, for the car driving, there should have been not less than two people. But it seemed to them that it was not enough and in 1865 the «Red Flag Act» was adopted. The law restricted the speed of cars within the city to 2 miles/h. In addition, the law obliged to have minimum of three people in the crew: a driver, a stoker, and a man with a red flag. Signal with a flag, went ahead of the car at a distance of 55 meters and informed the passers-by of the approaching danger, waving the red flag [2, p. 24-27]. The «Red Flag Act» actually destroyed the emerging automotive industry in the UK – and the designers of the cars from France and Germany broke ahead. For example, L. Serpollet (Fig. 1), the inventor from France even achieved the speed of steam engine car in 120 miles/h; unfortunately, the efficiency remained only 3%.


*Fig. 1. – Car by L. Serpollet*

Instead, cars with an internal combustion engine were created. Thus in Germany in 1883, K. Benz developed a two-cylinder engine. His countryman – G. Daimler developed the first car with four cylinders in 1889. Starting from the inventions by K. Benz and G. Daimler the cars with internal combustion engine were developed in the world. Many publications are dedicated to these inventors, their names are known throughout the world. In particular, this was due to the powerful sponsorship of the fervent racing driver E. Elinnek, who, in honor of his daughter, gave the name «Mercedes-Benz» [4; 5, p. 83; 6, p. 21]. At the same time, in Europe there were less well-known designers-innovators of cars. Their names are known only to a narrow circle of specialists, but they have done a lot for the development of the automotive industry in their country. One of such innovative scientists is the Beckmann family.

At the end of the XIX century many bicycle factories have changed their fabrication to the production of ~~a~~ car. At the beginning cars remained a toy for the elite. In Europe and North America, there were many designers-innovators who wanted to realize their own ideas about the creation of a car. One of such innovators worked in the city of Breslau (now the city of Wroclaw, Poland). Otto Beckmann (1841-1889), founded the first bicycle factory in Silesia on October 01, 1882–[7, p. 120], in the courtyard of the house at Tauentzienstrasse 124 (now Kościuszki

Street). After his death in 1889, his son, Paul Beckmann (1866-1914) (Fig.2), headed this business. Soon the first car appeared on the streets of Wroclaw, causing a huge sensation. P. Beckmann decided to try to take challenge at the newly formed industry.

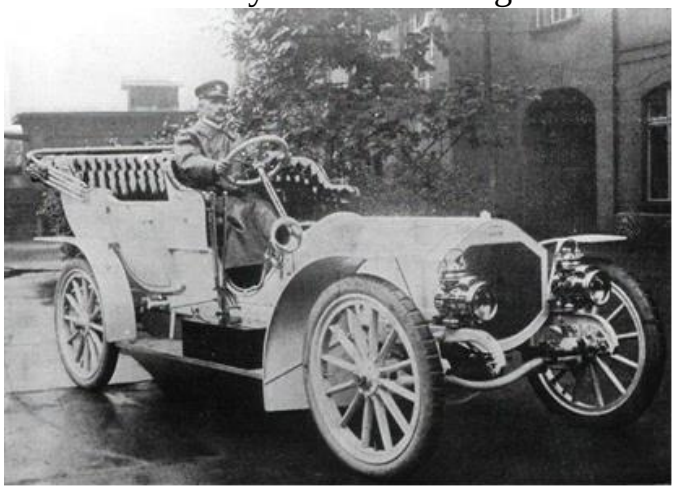

*Fig. 2 – Paul Beckmann, 1906*

Today, there is very little information about activity by P. Beckmann and his family. The company's archives were lost during the World War II. Available information about Beckmann's family is not generalized and is fragmentary. The purpose of the article is, based on available information and interviews by the descendants of the Beckman family, to create a coherent picture of Beckmann's contribution to the automotive industry in Europe.

P. Beckmann's construction activity began with the purchase in 1898 of the license of the leading French brand De Dion-Bouton (Fig. 3), and automobile production under his own name. Like other designs of that time, the car looked like a carriage without a horse. The passengers were sitting on two couches facing each other. The first little car Beckmann (Voiturette) had only a one-cylinder 6.5 HP petrol engine [7, p. 122].

Already in four years – since 1902, Beckmann cars were exhibited at car exhibitions in Leipzig, Berlin and Frankfurt am Main.

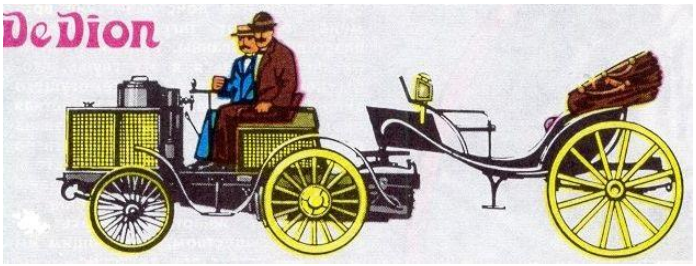


*Fig.3 – Car by De Dion*

Before World War I, more and more complex and modern designs of the Wroclaw plant appeared on the market. Beckmann produced the cars in small series, but had a wide range. In particular, the plant produced small (Voiturette), lorry (Tonneau), Phaetons, Limousine (Fig. 4), Coupé, Droschke, Mail (Lieferung) (Fig. 5) and sports cars (Sportwagen) (Fig. 6) – thanks to its high quality and reliability they had a very good reputation. Before transition to licensed production and, finally,

developing and building their own engines, the first engines were gotten from Société Buchet, Ateliers de Construction, Mécanique l'Aster and De Dion-Bouton. In 1907 the engines by the French firm Mutel were mounted [8; 9, p. 787].

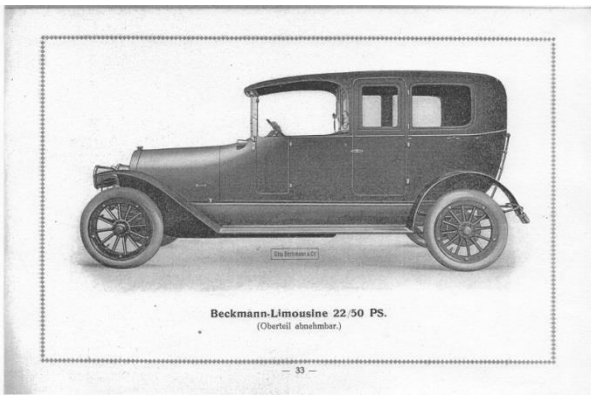


*Fig.4 – Beckmann Limousine*


*Fig. 5 – Beckmann Lieferungswagen*

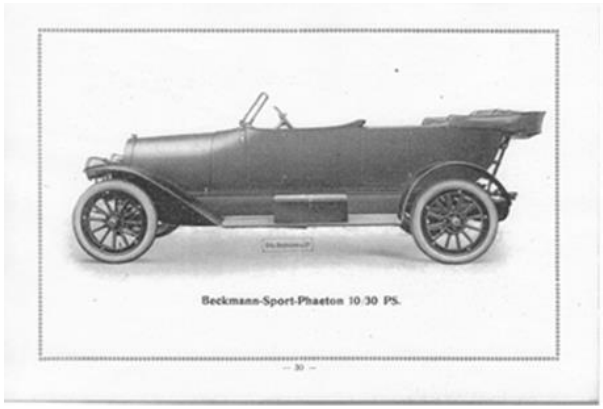


*Fig. 6 – Beckmann Sport-Phaeton*

Beckmann's cars were considered especially effective for the ground roads, and the 3-speed gearbox (also called «speed change» at that time) was endorsed by the press as exemplary.

The most efficient cars until 1914 had a capacity of 50 horsepower and developed a terrific speed of 95 kmph. Motor pioneers quickly realized that the best advertising is a sporting success. That's why P. Beckmann demonstrated his cars on numerous motor racing [7, p.123].

It is known that the first official motor racing was the Paris-Rouen race in 1894 [10, c.12]. The length of the route was 126 km. For the race 102 cars were registered, among which there were 38 cars with gasoline engines, 29 – with steam engines, 5 electric cars, 5 compressed air cars and 25 other types of cars. By the term «other types» meant machines powered by hydraulic pumps, a system of heavy loads, and also by the forces of the passengers with the help of pedals. Under the terms of the competition: «Cars must be safe, easy to manage and economical ...». The average speed was set at 16-17 kmph, but before the start, the technical commission decided to reduce it to 12.5 kmph. The main thing was to find out – whether cars will overcome the distance or not. Before the start, they made a qualifying test, during which a large part of the cars were weeded out, and only 21 cars came out in the final. «Steel horses» have proven their viability, although some did not get to the finish, coming off the road due to technical malfunctions. It is interesting that in the race, which is considered a starting point in motorsport, the steam car De Dion-Le Blant came to the finish as the first; it overcame the all distance in 5 hours 40 minutes. However, the main prize, awarded "for a set of discovered qualities", was shared by Panhard-Levassor and Peugeot petrol cars. With engines of no more than 4 hp they have fallen behind for only 5 minutes from a powerful 20 hp-strong «locomotive». Automobile races, despite the danger, but rather because of it, became more and more popular. In 1896, they were held twice, in a year – four, a year later – seven, then – twenty one! All of them passed between different cities of Europe [10, p. 16-17]. Exactly the cars produced by P. Beckmann repeatedly became prize-winners of the international automobile competitions of that time. At the same time, the owner of the company P. Beckmann can be considered not only a manufacturer, but also an active pioneer of car engineer. He successfully participated in various competitions such as «The Struggle for the High Quality of Breslau-Vienna» in 1902, when Beckmann's cars occupied the first three places, and at the «Test of Breslau-Frankfurt» in 1904, where P. Beckmann participated himself, was recognized by an honorary prize. Also on racing Herkomer – the so-called «reliability test» in 1906 and 1907 he participated in a specially designed car with a 40-hp 4-cylinder engine and a volume of 6.9 liters. In 1906 the developer P. Beckmann won silver and in 1907 – marked with a gold plaque [11, p. 302].

At the beginning of XX century this company had a dealer network in Berlin, Munich, Karlsruhe, Poznan and even in distant Moscow. Almost 50 «Beckmann» was used as a taxi in Berlin, which was a good indicator of their quality. At the same time, the production of trucks was organized, part of which was used by the Wroclaw fire department.

The growth of the range led to the change in the name of the plant, which since then was: Otto Beckmann and Co Erste Schlesische Velociped und Motorwagen fabrik. After reducing the production of bicycles in 1904, the name of the company was reduced too, and later it was called Otto Beckmann & Co Motorwagenfabrik. In 1913, the company's name changed a little, since «Motorwagen» was replaced by a more modern term «Automobil».

It should be noted that P. Beckmann can be considered as the inventor of the car seat belt, because at the turn of the XIX and XX centuries, he had equipped his small car by leather straps, which he tied his three children on each trip. Safety is above all!

*Fig. 7. – Otto Jr., Erna and Ilze Beckmann, 1903*


*Fig. 8. – Ilze Beckmann, 1925*

In addition to these activities, P. Beckmann also worked as an assistant, then, as the Treasurer of the Silesian Car Club, he was an «expert in the automotive industry» and was a member of the Association of German Motor Vehicle Manufacturers (later the Reich Association of Automotive Industries). Thus, he constantly kept up the «novelties» of the automotive industry and could influence on its development by making offers.

Unfortunately, shortly after the start of the World War I, Paul Beckman died, like his father Otto, at an early age of 48 in September 1914. None of his three children: Otto Jr., Erna and Ilze, were not adult and couldn't to manage the company at this time. After a very disadvantageous stage for a company with trusted leadership that coincided with the World War I, car production was stopped.

Only in the 1920s, the company was headed by the son of P. Beckmann – Otto (1894-1963). Under the management of Otto Junior the range of products has been significantly reduced. The company produced its own engines in 1922 and received units from Basse & Selve, Altena/Westphalia.

At the same time, cars from Wroclaw continued to take part in sporting events. It should be noted, one of the drivers was Ilze Beckmann (Fig. 8), daughter of Paul Beckmann, she was one of the first women of German automotive sport.

In the interwar period, cars slowly become a popular device of transportation, and at the same time, small, innovative enterprises collapsed or were bought by the

big brands. In 1926, Beckmann's company was bought by the Opel plant. By 1945, this branch continued to be headed by Otto Beckman [7, p.122].

Up to this day, only one car marked with a Wroclaw label has kept. This is Phaeton 45 hp, produced in 1911. It was in Sweden in the hands of a private collector, sold twice and now it is in Norway.


*Fig.9 – 124 Kościuszki Street, present view*

a

b

*Fig. 10. The courtyard of the house at 124 Kościuszki Street, the former Beckmann's factory*

Thus, the construction of cars at the end of XIX – at the beginning of XX centuries made as at large enterprises, which had a powerful financial help from the wealthy connoisseurs of such vehicles, as well as in small family factories where as a

designers were single scientists. Of course, the name of the Beckmann family should be made known to the wider public not only car enthusiasts, but all historians of science and technology.

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*АНОТАЦІЯ. Розглянуто становлення автомобільної галузі в Європі на початку XX ст. Наведено данні з розробки авто у Великій Британії, Франції, Німеччини. Показано як автомобільні перегони впливали на розвиток автомобілів, зокрема відбувся перехід від автомобілів з паровим двигуном до автомобілів з двигуном внутрішнього згорання.*

*Все більше ставало людей, зацікавлених у такому виді транспорту. Показано, що в цей час в Європі існувало чимало майстерень, де автомобілі розробляли учені-новатори. Серед таких піонерів автомобілебудування є родина Бекманнів. Описана діяльність родини, починаючи від Поля Бекманна до його сина Отто молодшого і навіть його доньки Ільзе.*

*На сьогодні вкрай обмежена інформація про внесок родини Бекманнів у розвиток автомобільної галузі в Європі. Саме Поль Бекманн розпочав конструювання автомобілів у Вроцлаві. На заснованій його батьком фабриці був налагоджений випуск як малих автомобілів так і вантажних та, навіть, спортивних. Зазначається, що найбільш ефективні автомобілі до початку першої світової війни розвивали швидкість до 95 км/год. Автомобілі виробництва родини Бекманнів ставали призерами тодішніх міжнародних змагань. Самого Поля Бекманна можна вважати ініціатором ременя безпеки. Його автомобілі були обладнані спеціальними шкіряними ремінцями.*

*Треба зазначити, що компанія успішно розвивалася та мала дилерську мережу у Німеччині, Польщі та Росії.*

*У міжвоєнний період компанія занепала і була викуплена більш великим брендом. Проте родинною справою продовжив опікуватися Отто молодший,*

*син Поля Бекманна. На сьогодні залишився лише один автомобіль з позначкою Вроцлавського автозаводу.*

***Ключові слова:*** *автомобілебудування, родина Бекманнів, Вроцлав, автоперегони, закон червоного прапору, К. Бенц, Г. Даймлер, Л. Серполле*.